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DEPARTMENT OF TRANSPORTATION

Coast Guard

■

FEDERAL COMMUNICATIONS COMMISSION

■

EMERGENCY POSITION INDICATING RADIOBEACONS

Proposed Rule Making

DEPARTMENT OF TRANSPORTATION

Coast Guard

[46 CFR Parts 33, 35, 75, 78, 94, 97, 161, 180, 185, 192, 196]

[CGD 73-24 PH]

EMERGENCY POSITION INDICATING RADIOBEACON

Carriage, Operational Testing, and Approval

The Coast Guard is considering amendments to the lifesaving equipment regulations and the operations regulations to require that certain inspected vessels in ocean and coastwise service carry an emergency position indicating radiobeacon (EPIRB) as part of their lifesaving equipment. Minimum tests to be conducted to insure that the equipment is operative would be prescribed. Finally, it is proposed to amend the lifesaving equipment specifications to include specifications for approval of emergency position indicating radiobeacons (EPIRB).

Interested persons are invited to participate in this rule making by submitting written data, views, or arguments to the Executive Secretary, Marine Safety Council (GCMC/82), 400 Seventh Street SW., Room 8234, Washington, DC 20590 (phone 202—426-1477). Written comments should include the docket number of this notice, the name and address of the person submitting the comments, and the specific section of the proposal to which each comment is addressed.

The Coast Guard will hold a public hearing April 18, 1973, at 10 a.m. in Room 7200, at the Department of Transportation, Nassif Building, 400 Seventh Street SW., Washington, DC, to receive written and oral comments from interested persons. The hearing will be conducted by a member or representative of the Marine Safety Council, who may apportion time for presentation. Each person desiring to speak at this hearing is requested to notify the Executive Secretary of the time needed for his presentation and is encouraged to submit a written copy or summary after the hearing of his oral presentation.

All communications received on or before April 30, 1973, will be fully considered before final action is taken on this proposal.

This proposal may be changed in light of comments received; however, acknowledgement of individual comments will not be made. All comments will be available for examination in Room 8234.

The regulations will take effect twelve (12) months after publication in the FEDERAL REGISTER as a final rule.

It is proposed to require that the following classes of inspected vessels in ocean and coastwise service:

1. Tank vessels,
2. Passenger vessels,
3. Cargo and miscellaneous vessels,
4. Small passenger vessels, and
5. Oceanographic vessels

carry an emergency position indicating radiobeacon (EPIRB) to be stowed in a manner such that should the vessel sink, it will float free and automatically activate and in a location where it will be readily accessible for testing and emergency use.

These proposals are the culmination of an effort dating from 1957 when a Coast Guard study of an extensive air-sea/search effort determined the probability of location of survivors and the cost involved for both a visual search and an electronic search using emergency beacons. Because the results showed a significant increase in the probability of survivor location and decrease in search cost, the study recommended that seagoing vessels be required to carry EPIRB's operating on 121.5 and 243 MHz.

The Coast Guard carried this proposal to the 1960 SOLAS Conference. The SOLAS Conference recognized the need for EPIRB's and recommendation No. 48 was adopted by the final 1960 SOLAS Convention, this recommendation states:

> The Conference, recognizing that an automatic nondirectional emergency position indicating radiobeacon, will improve safety of life at sea by greatly facilitating search and rescue, recommends that governments should encourage the equipping of all ships, where appropriate, with a device of this nature which shall be small, lightweight, floatable, watertight, shock resistant, self-energizing, and capable of 48 hours continuous operation. The organization should consult with the International Civil Aviation Organization (ICAO) and the International Telecommunications Union (ITU) with a view to determining the standard of worldwide application to which the radio characteristics should conform.

Several reports of Marine Boards of Investigation have noted the need for EPIRB's. Among these are the SS *Marine Sulphur Queen* which disappeared with all hands in February 1963; the *Daniel J. Morrel* which broke in two and sank with only one survivor in November 1966; and most recently the SS *Texaco Oklahoma*, which broke in two and sank with the loss of 31 lives, in March 1971. Other cases are on file which support the need for such a device. These cases indicate that many lives probably could have been saved through an early distress alert and prompt rescue of survivors and that millions of dollars expended on search efforts could have been saved.

In the case of the *Texaco Oklahoma*, the stern section with 31 persons on board remained afloat for about 27 hours. Those on board the vessel attempted to make their plight known by use of the lifeboat radio, by lights, and by flares, all without success. An AMVER plot indicates that there were 18 participating vessels within 120 miles of the stricken ship during this period. Numerous commercial and military aircraft frequent the area and would most likely have heard an EPIRB signal.

The SS *V. A. Fogg* was lost with all hands on February 1, 1972. The vessel exploded and as a result sank suddenly. When the vessel became overdue shortly thereafter, a massive search was launched which lasted 11 days before the sunken hull was located. An EPIRB would probably have shortened the search by several days.

In January 1972, the IMCO Subcommittee on Radio Communications recommended to the Maritime Safety Committee that as a matter of urgency, all administrations require that ships subject to SOLAS under their jurisdiction carry an EPIRB operating on 2182 kHz and/or 121.5 Mhz and/or 243 Mhz. This recommendation is being considered by the Maritime Safety Committee. Norway, Germany, France, and Japan have implemented requirements for EPIRB's to be carried on their vessels which are subject to the SOLAS Convention.

The National Transportation Safety Board has strongly supported the Coast Guard's recommendations regarding a requirement for the carriage of EPIRB's by seagoing vessels. They have made specific recommendations in the case of the SS *Texaco Oklahoma* and have recently published a Special Study of Survivor-Locator Systems for Distressed Vessels which stressed the value of EPIRB's.

Present statutory authority to require such devices is limited to inspected vessels. Although no requirement can be made under existing law, those uninspected vessels operating beyond the range of marine VHF radio distress coverage will be permitted by the Federal Communications Commission and encouraged to carry EPIRB's as part of their lifesaving equipment.

In consideration of the foregoing, it is proposed to amend Chapter I of Title 46 of the Code of Federal Regulations as follows:

PART 33—LIFESAVING EQUIPMENT

1. By adding § 33.15–30 to Part 33 to follow § 33.15–25 to read as follows:

§ 33.15–30 Emergency position indicating radiobeacon (EPIRB)–T/OC.

All vessels in ocean and coastwise service must be provided with an approved emergency position indicating radiobeacon (EPIRB). The EPIRB must be of the Type A class stowed in a location readily accessible for testing and emergency use and in a manner so that, if the vessel sinks, it will float free and activate automatically. Batteries must be replaced after the EPIRB is used in an emergency and on the date marked on the outside of the unit.

PART 35—OPERATIONS

2. By adding § 35.10–25 to Part 35 to follow § 35.10–20 to read as follows:

§ 35.10–25 Emergency position indicating radiobeacon (EPIRB)–T/OC.

The master shall insure that the EPI RB required in § 33.15–30 of this chapter is tested weekly using the integrated test circuit and output indicator to determine that the unit is operative.

§ 35.40–40 [Amended]

3. By amending § 35.40–40(a) of Part 35 by adding the word "EPIRB" after the words "life preserver."

PART 75—LIFESAVING EQUIPMENT

4. By adding § 75.60 to Part 75 to follow § 75.50–90 to read as follows:

§ 75.60 Emergency position indicating radiobeacon (EPIRB).

All vessels in ocean and coastwise service must be provided with an approved emergency position indicating radiobeacon (EPIRB). The EPIRB must be of the Type A class, stowed in a location readily accessible for testing and emergency use and in a manner so that, if the vessel sinks, it will float free and activate automatically. Batteries must be replaced after the EPIRB is used in an emergency and on the date marked on the outside of the unit.

PART 78—OPERATIONS

5. By adding § 78.17–85 to Part 78 to follow § 78.17–80 to read as follows:

§ 78.17–85 Emergency position indicating radiobeacon (EPIRB).

The master shall insure that the (EPIRB) required in § 75.60 of this subchapter is tested weekly using the integrated test circuit and output indicator to determine that the unit is operative.

6. By adding § 78.47–80 to Part 78 to follow § 78.47–75 to read as follows:

§ 78.47–80 Emergency position indicating radiobeacon (EPIRB).

The emergency position indicating radiobeacon (EPIRB) must be marked with the vessel's name.

PART 94—LIFESAVING EQUIPMENT

7. By adding § 94.60 to Part 94 to follow § 94.55–1 to read as follows:

§ 94.60 Emergency position indicating radiobeacon (EPIRB).

All vessels in ocean and coastwise service must be provided with an approved emergency position indicating radiobeacon (EPIRB). The EPIRB must be of the Type A class, stowed in a location readily accessible for testing and emergency use and in a manner so that, if the vessel sinks, it will float free and activate automatically. Batteries must be replaced after the EPIRB is used in an emergency and on the date marked on the outside of the unit.

PART 97—OPERATIONS

8. By adding § 97.15–65 to Part 97 to follow § 97.15–60 to read as follows:

§ 75.60 Emergency position indicating ing radiobeacon (EPIRB).

The master shall insure that the EPIRB required in § 94.60 of this subchapter is tested weekly using the integrated test circuit and output indicator to determine that the unit is operative.

9. By adding § 97.37–55 to Part 97 to follow § 97.37–50 to read as follows:

§ 97.37–55 Emergency position indicating radiobeacon (EPIRB).

The emergency position indicating radiobeacon (EPIRB) must be marked with the vessel's name.

PART 161—ELECTRICAL EQUIPMENT

10. By adding Subpart 161.011 to Part 161 to follow Subpart 161.008 to read as follows:

Subpart 161.011—Emergency Position Indicating Radiobeacons

Sec.

161.011–1 Purpose.
161.011–5 Classes.
161.011–10 Requirements.
161.011–15 Marking.
161.011–20 Procedure for approval.

AUTHORITY: 46 U.S.C. 481; 49 CFR 1.4(b)(1)(ii); 1.46(b).

Subpart 161.011—Emergency Position Indicating Radiobeacons

§ 161.01–1 Purpose.

The intent of this specification is to establish the approval requirements for emergency position indicating radiobeacons (EPIRB) for use on vessels as lifesaving equipment.

§ 161.011–1 Purpose.

Emergency position indicating radiobeacons (EPIRB) are classed as follows:

(a) Type A—an EPIRB intended to be fitted on a vessel so that it is readily available for testing and emergency use, and capable of floating free of the vessel and activating automatically in the event the vessel sinks.

§ 161.011–10 Requirements.

An emergency position indicating radiobeacon (EPIRB)—Type A must:

(a) Comply with Title 47, Code of Federal Regulations, Part 83, of the rules of the Federal Communications Commission and operate on frequencies 121.5 and 243 MHz;

(b) Be activated by automatic means when released from a sinking vessel;

(c) Be fitted with a manually activated test switch, or comparable device, associated test circuit, and output indicator;

(d) Be fitted with a premounted antenna which will automatically deploy when released;

(e) Operate in the floating mode so that the signal is effective in expected sea conditions.

§ 161.011–15 Marking.

(a) Type A EPIRB's must be marked in accordance with Title 47, Code of Federal Regulations, Part 83, of the rules of the Federal Communications Commission.

(b) Type A EPIRB's must be marked with the type and U.S. Coast Guard approval number; for example, "Type A, U.S.C.G. 161.011."

(c) The expiration date must be placed on the batteries by the manufacturer and permanently and legibly marked on the outside of the EPIRB.

§ 161.011–20 Procedure for approval.

(a) EPIRB's for use on vessels to meet the requirements of Subpart 161.011 must be approved by the Commandant, U.S. Coast Guard, Washington, D.C. 20590. Application for approval and correspondence pertaining to this specification must be addressed to U.S. Coast Guard Headquarters (GMMT–3/83), 400 7th Street SW., Washington, DC 20590.

(b) Application for Type A EPIRB approval must include:

(1) Manufacturer's named place of manufacture, brand name, and/or model identification, and if applicable, the U.S. distributor(s).

(2) Proof of FCC type approval or type acceptance.

(3) A drawing (three copies) indicating typical "Float Free" vessel installation and general design arrangement of EPIRB.

(4) Technical description of EPIRB and its operation including statement on storage and operational life.

(5) Test report indicating satisfactory operation from drop at stowage height, satisfactory operation in expected sea conditions and compliance with FCC requirements.

(c) If found satisfactory, the U.S. Coast Guard will issue an approval number and publish notice of approval in the FEDERAL REGISTER and CG–190, Equipment List.

PART 180—LIFESAVING EQUIPMENT

11. By adding § 180.40 to Part 180 to follow § 180.35–10(b) to read as follows:

§ 180.40 Emergency position indicating radiobeacon (EPIRB).

All vessels in ocean and coastwise service must be provided with an approved emergency position indicating radiobeacon (EPIRB). The EPIRB must be of the Type A class, stowed in a location readily accessible for testing and emergency use and in a manner so that, if the vessel sinks, it will float free and activate automatically. Batteries must be replaced after the EPIRB is used in an emergency and on the date marked on the outside of the unit.

PART 185—OPERATIONS

12. By adding § 185.25–20 to Part 185 to follow § 185.25–15(a) to read as follows:

§ 185.20–25 Tests of emergency position indicating radiobeacon (EPIRB).

The person in charge of the vessel shall insure that the EPIRB is tested weekly using the integrated test circuit and output indicator to determine that the unit is operative.

13. By adding § 185.30–30 to Part 185 to follow § 185.30–25 to read as follows:

§ 185.30–30 Emergency position indicating radiobeacon (EPIRB).

The emergency position indicating radiobeacon (EPIRB) must be marked with the vessel's name.

PART 192—LIFESAVING EQUIPMENT

14. By adding § 192.55–5 to Part 192 to follow § 192.55–1 to read as follows:

§ 192.55–5 Emergency position indicating radiobeacon (EPIRB).

All vessels in ocean and coastwise service must be provided with an approved emergency position indicating radiobeacon (EPIRB). The EPIRB must be of the Type A class, stowed in a location readily accessible for testing and emergency use and in a manner so that, if the vessel sinks, it will float free and activate automatically. Batteries must be replaced after the EPIRB is used in an emergency and on the date marked on the outside of the unit.

PART 196—OPERATIONS

15. By adding § 196.15–65 to Part 196 to follow § 196.15–60 to read as follows:

§ 196.15–65 Emergency position indicating radiobeacon (EPIRB).

The master shall insure that the EPIRB required in § 192.60 of this chapter is tested weekly using the integrated test circuit and output indicator to determine that the unit is operative.

16. By adding § 196.37–49 to Part 196 to follow § 196.37–47 to read as follows:

§ 196.37–49 Emergency position indicating radiobeacon (EPIRB).

The emergency position indicating radiobeacon (EPIRB) must be marked with the vessel's name.

(46 U.S.C. 481; 49 CFR 1.4(b)(1)(ii); 1.46(b))

Dated February 21, 1973.

W. F. REA III,
Rear Admiral, U.S. Coast Guard, Chief, Office of Merchant Marine Safety.

[FR Doc.73-3909 Filed 3-2-73;8:45 am]

FEDERAL COMMUNICATIONS COMMISSION

[47 CFR Part 83]

[Docket No. 19693; FCC 73-202]

STATIONS ON SHIPBOARD IN THE MARITIME SERVICES

Emergency Position Indicating Radiobeacons

In the matter of amendments of Part 83, Stations on shipboard in the Maritime Services, to permit the use of the frequencies 121.5 MHz and 243 MHz by ship stations, survival craft stations, and emergency position indicating radiobeacons, Docket No. 19693.

1. Notice is hereby given of proposed rule making in the above-entitled matter.

2. In the Aviation Radio Services both 121.5 and 243 MHz are available for communications related to emergencies and to search and rescue operations. Presently only the frequency 121.5 MHz is available in the maritime service, and then, only under certain limited conditions for radiobeacon purposes. Since both air and surface craft are generally involved in emergencies and search and rescue operations in offshore water areas, it appears that it would be in the best interests of safety of life at sea if there were fewer restrictions on the use of these frequencies in the maritime service.

3. The frequency 121.5 MHz is a universally used radiotelephone channel (class A3 emission) for aircraft in distress or conditions of emergency. It also provides aviation a common frequency for survival communications and for emergency locator beacons (emission A9). Locator beacons of this type are commonly referred to as Emergency Locator Transmitters (ELTs) or Emergency Position Indicating Radiobeacons (EPIRBs). In the maritime community the most universally used term is the latter, so that designation will be used herein. The use of 121.5 MHz by Maritime in the United States is presently limited to vessels which have been registered or documented by the U.S. Coast Guard. For the most part these are commercial vessels of over 5 gross tons. Its use is further limited to class A2 emission, and to vessels which are authorized to carry and are equipped with a ship station.

4. The frequency 243 MHz, normally used by military aircraft for survival purposes, is available nationally for use by survival craft stations and equipment used for survival purposes (footnote US 98). However no provisions have been made in Part 83 to implement this footnote for the maritime service. The proposed amendment of the rules, as set forth in the attached appendix, would provide for the use of both the frequencies 121.5 and 243 MHz by all U.S. vessels expected to operate in international waters beyond the range of marine VHF distress coverage for use in survival craft and emergency position indicating radiobeacon (EPIRB) stations. Marine use of these frequencies in EPIRBs would then be permitted in the same manner as they are used by civil aircraft in ELTs, with the same technical characteristics and packaging requirements as observed by aviation. This will increase the efficiency of search and rescue operations as well as provide greater safety for an increased number of vessels and will permit some degree of standardization of survival radiobeacons. In addition, the proposed amendment would provide for the use of radiotelephony (class A3 emission) on the frequency 121.5 MHz, by authorized ship stations for emergency communications between ships and aircraft.

5. It is recognized that the EPIRB, as well as the aviation ELT, will often serve as a distress alerting device when other methods of communication are not successful or available. For this reason the proposed marine use of 121.5/243 MHz for EPIRBs is generally limited to the oceanic areas approximately 20 miles or more offshore, as described by the phrase "those whose vessels are expected to operate in international waters beyond the range of marine VHF distress coverage." It is felt that the safety of this rather limited number of vessels can be improved substantially and immediately by the use of EPIRBs, and that their use of the frequencies can be effectively controlled. However the millions of recreational boats which operate near the shore and in inland waters have been purposely excluded, since these vessels may use marine VHF radio or other extremely reliable methods to alert the shore to their situation. Also the potential inadvertent or improper use by this very large population could render the existing aviation distress and safety system, as well as the proposed offshore marine use, completely ineffective.

6. The proposed amendment to the rules conforms basically with the recommendations adopted by the Maritime World Administrative Radio Conference, Geneva 1967, and with Recommendation 48 of the 1960 Safety of Life at Sea Conference and subsequent recommendations of the Subcommittee on Radiocommunications and the Maritime Safety Committee of the Intergovernmental Maritime Consultative Organization (IMCO). More specifically the proposed amendment is in response to a recent request of the U.S. Coast Guard and to recent recommendations of the National Transportation Safety Board.

7. The proposed amendments to the rules, as set forth below are issued pursuant to authority contained in sections 4(i) and 303 (b), (c), (e), (f), and (r) of the Communications Act of 1934, as amended.

8. Pursuant to applicable procedures set forth in § 1.415 of the Commission's rules, interested persons may file comments on or before April 6, 1973, and reply comments on or before April 16, 1973. All relevant and timely comments and reply comments will be considered by the Commission before final action is taken in this proceeding. In reaching its decision in this proceeding, the Commission may also take into account other relevant information before it, in addition to the specific comments invited by this Notice.

9. In accordance with the provisions of § 1.419 of the Commission's rules, an original and 14 copies of all statements, briefs, or comments filed shall be furnished the Commission. Responses will be available for public inspection during regular business hours in the Commission's Broadcast and Docket Reference Room at its Headquarters in Washington, D.C.

Adopted: February 21, 1973.

Released: February 26, 1973.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

1. Section 83.3 is amended by adding a new paragraph (n) to read as follows:

§ 83.3 Maritime Mobile Services.

* * * * *

(n) *Emergency position indicating radiobeacon station.* A station in the maritime mobile service consisting of a transmitter only, the distinctive emissions of which are intended to facilitate search and rescue operations.

* * * * *

2. Section 83.7 is amended by lettering all paragraphs and adding the following new definition:

§ 83.7 Technical.

* * * * *

(j) *Peak effective radiated power.* For emergency position indicating radiobeacon stations, the average power supplied to the antenna by the transmitter during one radio frequency cycle at the highest crest of the modulation envelope, multiplied by the relative gain of the antenna in a given direction. The relative gain is referenced to a quarter-wave loss-free monopole mounted on a one wavelength diameter ground plane.

3. Section 83.68 is amended to read as follows:

§ 83.68 Authority for survival craft stations and emergency position indicating radiobeacon stations.

(a) Authority to operate survival craft stations, which may include an emergency position indicating radiobeacon (EPIRB) station, will be granted only when the parent vessel is equipped with and authorized to operate a ship station.

(b) Authority to operate an EPIRB station will be granted only for use aboard vessels authorized to carry survival craft stations or to those whose vessels are expected to operate in international waters beyond the range of marine VHF distress coverage.

4. Paragraph (c) of § 83.131 is amended to read as follows:

§ 83.131 Authorized frequency tolerance.

* * * * *

(c) Authorized frequency tolerance for ship, survival craft, and emergency position indicating radiobeacon (EPIRB) stations operating on frequencies above 27.5 MHz.

* * * * *

(3) EPIRB stations on 121.5 and 243 MHz	50

* * * * *

5. Paragraph (a) of § 83.132 is amended to read as follows:

§ 83.132 Authorized classes of emission.

(a) * * *

(1) Stations using radiotelegraphy:

* * * * *

(iii) For the frequency 121.5 MHz....A2, A9.
(iv) For the frequency 243 MHz....A9.

(2) Stations using radiotelephony:

* * * * *

(ii) For the frequency 121.5 MHz....A3.

* * * * *

6. The table in paragraph (a) of § 83.133 is amended to read as follows:

§ 83.133 Authorized bandwidth.

* * * * *

Class of emission	Emission designator	Authorized bandwidth (kHz)	
* * *	* * *	* * *	
A9	3.2A9		5 11
* * *	* * *	* * *	

[5] Applicable only to emergency position indicating radiobeacon stations.

7. Section 83.134 is amended by adding a new paragraph (h) to read as follows:

§ 83.134 Transmitter power.

* * * * *

(h) For emergency position indicating radiobeacon stations operating on the frequencies 121.5 and 243 MHz the peak effective radiated power on each frequency, measured during and at the end of 48 hours of continuous operation, and without replacement or recharge of batteries, shall not be less than 75 milliwatts. This specification shall apply to all units whether dry, or immersed for any or all of the 48-hour period in fresh or salt water, as long as the entire antenna extends above the water surface. The method of peak effective radiated power measurement specified in the Radio Technical Commission for Aeronautics (RTCA) Document No. DO–145 or DO–146 shall be employed. The required power shall obtain over an air temperature range from −20 to +55 degrees centrigrade.

8. Section 83.137 is amended by adding a new paragraph (i) to read as follows:

§ 83.137 Modulation requirements.

* * * * *

(i) Emergency position indicating radiobeacon stations operating on the frequencies 121.5 and 243 MHz shall employ a distinctive emission consisting of amplitude modulation of the carrier with an audio frequency sweeping downward over a range of not less than 700 Hz, within the range 1600 to 300 Hz, with a sweep rate between 2 and 4 times per second. The modulation applied to the carrier shall be in accordance with that specified in the Radio Technical Commision for Aeronautics (RTCA) Document No. DO–145 or DO–146.

9. Paragraph (b) of § 83.139 is amended to read as follows:

§ 83.139 Acceptability of transmitters for licensing.

* * * * *

(b) Each survival craft station transmitter or emergency position indicating radiobeacon station transmitter which has not been type approved pursuant to §§ 83.469 or 83.472 shall be type accepted for licensing.

* * * * *

10. Paragraphs (a) and (b) of § 83.141 are amended and a new paragraph (d) is added to read as follows:

§ 83.141 Special Requirements for survival craft stations.

(a) Equipment provided for use in survival craft stations shall, if capable of transmitting on:

* * * * *

(4) The frequency 121.5 MHz, be able to use A2 or A3 emission.

(b) If a receiver is provided, it shall be capable of receiving the frequency and type of emission which the transmitter is capable of using: *Provided,* That if the transmitter frequency is 8364 kHz the receiver shall be capable of receiving A1 and A2 emission throughout the band 8320–8745 kHz: *And further provided,* That if the transmitter frequency is 121.5 MHz using A3 emission, there shall be an associated receiver capable of receiving A3 emission.

* * * * *

(d) When an EPIRB station is contained as a part of a survival craft station, the EPIRB portion shall be limited to the frequencies 121.5 and 243 MHz (transmission only) and to A9 emission.

11. A new § 83.144 is added to read as follows:

§ 83.144 Special requirements for emergency position indicating radiobeacon stations.

(a) Emergency position indicating radiobeacon (EPIRB) stations are limited to transmission only, using A9 emission, on the frequencies 121.5 and 243 MHz.

(b) The EPIRB may be turned on by automatic means, such as water activated battery, or by an on-off switch. In any event, a positive means of turning the equipment off shall be provided. Where an on-off switch is employed, a guard or other means shall be provided to prevent inadvertent activation.

(c) The EPIRB shall be provided with a visual and/or audible indicator which clearly shows that the device is transmitting.

(d) In regard to testing, each EPIRB shall be capable of complying with the following requirements:

(1) May be fitted with a manually activated test switch, or comparable device, associated test circuit, and output indicator which shall, in the test position:

(i) Permit the operator to determine that the unit is operative;

(ii) Switch the transmitter output to a test circuit (dummy load), the impedence of which is equivalent to that of the antenna affixed to the EPIRB; and

(iii) Reduce radiation to a level not to exceed 15 microvolts per meter at a distance of twenty (20) feet, free space, irrespective of direction.

(2) If so equipped, the manually activated test switch, or comparable device, shall be of a type which must be held in position to operate, and which will switch the transmitter off and reconnect the output from the test circuit (dummy load) to the antenna when released. A guard or other means shall be provided to prevent its inadvertent activation.

(3) Means shall be provided to protect the indicator from damage due to dropping or contact with other objects.

(4) An EPIRB without a test circuit as described in paragraph (c) (1) and (2) of this section may be tested in coordination with, or under the control of the U.S. Coast Guard to insure that testing is conducted under electronic shielding, or other conditions sufficient to insure that no transmission or radiated energy occurs that could be received by a radio station and result in a false distress alarm. If testing with Coast Guard involvement is not practicable, brief operational tests are authorized provided the tests are conducted within the first five minutes of any hour, are not longer than three audio sweeps or one second,

whichever is longer, and, if available, a dummy load is used during test.

(e) The power and modulation requirements specified in this part for EPIRBs shall be met under the environmental test conditions, with the exception of the temperature limits, specified in the Radio Technical Commission for Aeronautics (RTCA) Document Nos. DO–145 or DO–146. The air temperature limits for testing these devices shall be from −20 to 55 degrees centigrade. Additionally those tests specified by RTCA with regard to altitude, decompression, and overpressure are not applicable to EPIRB stations.

(f) The equipment shall not incorporate any vacuum tubes in its design. Components shall be so rated that the equipment will meet the requirements specified for EPIRBs in this part after extended periods of inaction while carried in vessels and subjected to the environmental conditions prescribed. Operation into any load likely to occur in service, from open to short, shall not cause continuing degradation in performance.

(g) The operation of controls intended for use during normal operation in all possible combinations or sequences shall not result in a condition whose presence or continuation would be detrimental to the continued performance of the equipment. The number of controls shall be kept to a minimum to permit ease of operation of the equipment.

(h) The EPIRB shall have a battery for power supply which is independent of the vessel power supply. The battery, whether an original or replacement component, shall be designed as an integral part of the equipment or be securely attached thereto. The date (month and year) of the battery's manufacture shall be permanently and legibly marked on the battery and the expiration date (month and year) upon which 50 percent of its useful life has expired shall be permanently and legibly marked on both the battery and the outside of the transmitter. The useful life of the battery (established by the EPIRB manufacturer) is the length of time, after its date of manufacture, that the battery may be stored under normal marine environmental conditions without losing its ability to meet the transmitter power requirement prescribed in § 83.134(h). The electro-mechanical connectors on and to the battery must be corrosion resistant and positive in action, and may not rely for contact upon spring force alone.

(i) The equipment, exclusive of water activated batteries, shall be waterproof and shall not be activated by rain. The effects of standing water on the outer surface of the equipment shall have no significant adverse effect upon the performance of the EPIRB.

(j) Concise, unambiguous operating instructions, understandable by untrained personnel, shall be conspicuously and permanently displayed on the equipment. The display shall be weather resistant, waterproof, and abrasion resistant.

(k) The exterior of the equipment shall have no sharp edges or projections which could easily damage inflatable survival equipment, injure personnel or damage their clothing. Means shall be provided to secure the EPIRB to a survival craft or person.

(l) If the antenna is not designed to be stowed in its normal operating position ,the antenna shall be deployable to the designed length and operating position in a foolproof manner. The antenna shall be securely attached to the EPIRB and of such design that it is easy to de-ice. The antenna shall provide optimum performance at 121.5 and 243 MHz and its radiation pattern in the horizontal plane shall be essentially omnidirectional.

(m) The equipment shall be so designed that it may be deployed, its controls actuated, or the antenna erected, each by a single action task which can be performed by either hand.

12. Section 83.164(b) is amended to read as follows:

§ 83.164 Waivers of operator requirement.

* * * * *

(b) No radio operator authorization is required for the operation of a survival craft station or an emergency position indicating radiobeacon station while it is being used solely for survival purposes or to facilitate search and rescue operations.

13. Section 83.178 is amended by adding a new paragraph (e) to read as follows:

§ 83.178 Unauthorized transmissions.

Stations subject to this part shall not:

* * * * *

(e) Use telephony on 243 MHz.

14. Section 83.233 is amended to read as follows:

§ 83.233 Frequencies for use in distress.

* * * * *

Frequency band	Emission	Carrier frequency
405–535 kHz	A2	500 kHz.
1605–4000 kHz	A3, A3H	2182 kHz.
118–136 MHz	A2, A3, A9	121.5 MHz.
156–162 MHz	F3	156.8 MHz.
225–399.9 MHz	A9	243 MHz.

15. A new § 83.252 is added to read as follows:

§ 83.252 Equipment to facilitate search and rescue operations.

(a) Survival craft stations may transmit the signals, calls and messages described in this subpart.

(b) Emergency position indicating radiobeacons may transmit only the distinctive emission specified in § 83.137 and only on the frequencies 121.5 and 243 MHz.

16. Paragraph (c) of § 83.322 is amended and a new paragraph (d) is added to read as follows:

§ 83.322 Frequencies for use in distress.

* * * * *

(c) The frequency 121.5 MHz (using class A2 emission) is available for radiobeacon purposes to survival craft stations. The frequency 121.5 MHz (using A9 emission) is available to emergency position indicating radiobeacon (EPIRB) stations for facilitating search and rescue operations.

(d) The frequency 243 MHz (class A9 emission only) is available to EPIRB stations for facilitating search and rescue operations.

17. Section 83.326 is amended by adding a new paragraph (c) to read as follows:

§ 83.326 Identification of stations.

* * * * *

(c) Emergency position indicating radiobeacon stations do not require identification.

18. Paragraph (b) of § 83.352 is amended to read as follows:

§ 83.352 Frequencies for use in distress.

* * * * *

(b) The frequency 121.5 MHz (class A3 emission) is available to authorized ship stations for emergency communications between ships and aircraft.

19. Paragraph (c) of § 83.401 is amended to read as follows:

§ 83.401 Assignable frequencies for direction finding.

* * * * *

(c) In the event of distress, the following frequencies may be used for radio direction finding for purposes of search and rescue by any authorized ship or survival craft station or by emergency position indicating radiobeacon stations as described in this part.

410 kHz, 500 kHz, 2182 kHz, 8364 kHz, 121.5 HMz, 243 MHz

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